



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,791	08/25/2006	Jorg Heuer	32860-001087/US	1335
30596 7590 02/19/2009 HARNESSE, DICKEY & PIERCE, P.L.C. P.O.BOX 8910 RESTON, VA 20195			EXAMINER TRAN, QUOC A	
			ART UNIT	PAPER NUMBER
			2176	
			MAIL DATE	DELIVERY MODE
			02/19/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/590,791	<b>Applicant(s)</b> HEUER ET AL.	
	<b>Examiner</b> Quoc A. Tran	<b>Art Unit</b> 2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 25-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 10/590,791.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

This is a Final Office Action in response to the Applicant's Remarks filed 12/02/2008. Claims 1-23 and 25-27 are pending and rejected. Claim 24 was previously cancelled. Claim 1 is independent claim; Priority of Germany No 10 2004 009 617.1 dated **02/27/2004** (Siemens).

#### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed Cir 1993). *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969);

Claim(s) claims 1-23 and 25-27 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

Art Unit: 2176

claims 11-19 of Pending U.S. Patent Application No. 10/564,601 filed 07/02/2004, Publication No US 20060212796A1 which was published on 09/21/2006. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are both exhibiting similar method for coding a structure document uses the inheriting relationship of its namespace/schema.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-23 and 25-27, of current application and Pending U.S. Patent Application No. 10/564,601 are compared as follows, showing the obviousness of the teachings of the patent to the claimed invention:

<b>Current Application</b>	<b>US Application 10/564,601</b>
<b>Claims 1-23 and 25-27:</b>	<b>Claims 11-19:</b>
<p>A method for coding a structured, document, comprising: [claim 1]</p> <p>generating a plurality of codes using at least one namespace and allocating the plurality of codes for types defined by : carried out, for each namespace, an assignment to further namespace such that at least one assignment information is generated such that at least one inheritance relationship is described between inheriting namespace and bequeathing name spaces; [ see claim 1]</p> <p>and forming the assignment information of the inheriting name space from a list of codes of the basic types of header types of the inheriting name space, with basic types being types from which</p>	<p>A method for coding a structured document, comprising the steps of: [ see claim 11]</p> <p>generating a plurality of codes using a plurality of namespaces comprising data types; defining elements in one or more namespaces; assigning independent codes for at least one namespace having defined elements, wherein the independent codes are generated from other namespaces; wherein the independent codes within a given namespace are assigned for data types comprising the following steps: [ see claim 11]</p> <p>sorting data types of a namespace, which have been inherited from data types of other namespaces, in a list according to global TypeCodes of the respective basic data types, wherein the data types include</p>

the header type originates directly or from which a header type originates, which in turn is the basic type of a header type of the inheriting name space [claim 1]	the data types in other namespaces from which the sorted data types have been inherited; sorting lexicographically data types of a namespace which have been inherited from a specified basic data type of a specific other namespace; sorting the data types of a namespace which have not been inherited from a data type of another namespace into the existing list of data types; assigning the independent codes in the order of the list to the data types of the namespace [ see claim 11]
Claims 2-23 and 25-27	Claims 11-19

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

*Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.*

Claims 21-23 and 27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

#### ***Claims 21-23 and 27:***

In summary, Claims 21-23 and 27 recite a “method” comprising a “coding and decoding device”. The recited “coding device” and “decoding device” for coding and decoding XML-based document such MPEG-7 utilizing instances of schemas/namespaces are illustrated at Figure 1, and the Specification expressly states, “a coding device and a decoding device to implement the inventive coding and/or decoding method. An example embodiment of the invention also includes a coding and decoding device, with which an embodiment of the inventive coding method and an

Art Unit: 2176

*embodiment of the inventive decoding method can be implemented"* see Specification → Page 11, Paragraph [0039]. The Examiner interprets **coding device** and **decoding device** described herein **may be performed in** either **hardware** or **software**, since it is not clearly define the separation of either hardware or software. Thus, for purposes of examination, the examiner interprets the recited "*coding device*" and "*decoding device*" for coding and decoding XML-based document such MPEG-7 utilizing instances of schemas/namespaces to comprise only computer software. Accordingly, the "*coding device*" and "*decoding device*" recited in Claim(s) 21-23 and 27 is software *per se*.

Computer software is not a process, a machine, a manufacture or a composition of matter, as set forth in 35 U.S.C. 101. Accordingly, the claims do not recite statutory subject matter.

In the interest of compact prosecution, the application is further examined against the prior art, as stated below, upon the assumption that the applicants may overcome the above stated rejections under 35 U.S.C. 101.

Applicant may obviate the rejection by cancelling the claims.

***Claims Rejection – 35 U.S.C. 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

**Claims 1-23 and 25-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Seyrat et al.**, (US 20040068696A1 filed 02/04/2002) [hereinafter “Seyrat”], in view of **Mory et al.**, (US 20020138517A1 filed 10/17/2001) [hereinafter “Mory”].

Regarding ***independent claim 1***, Seyrat teaches:

**A method for coding a structured, document, comprising:**

(At Fig. 2 and Page 4 Paragraph 90→ Seyrat discloses this limitation that is a MPEG-7 (item 10) comprises a schema compiler (item 11) designed to receive and process schemas (item 9) such as XML schemas [i.e., namespace- see the applicant 's disclosure at Page 2 Paragraph [0007]], in order to obtain a binary syntax code (item 13) [i.e., coding] that is executed to decode encoded documents 7 [i.e., coding a structure] that are applied in input of the decoder 10, the latter providing in output decoded documents 8 in format XML for example.)

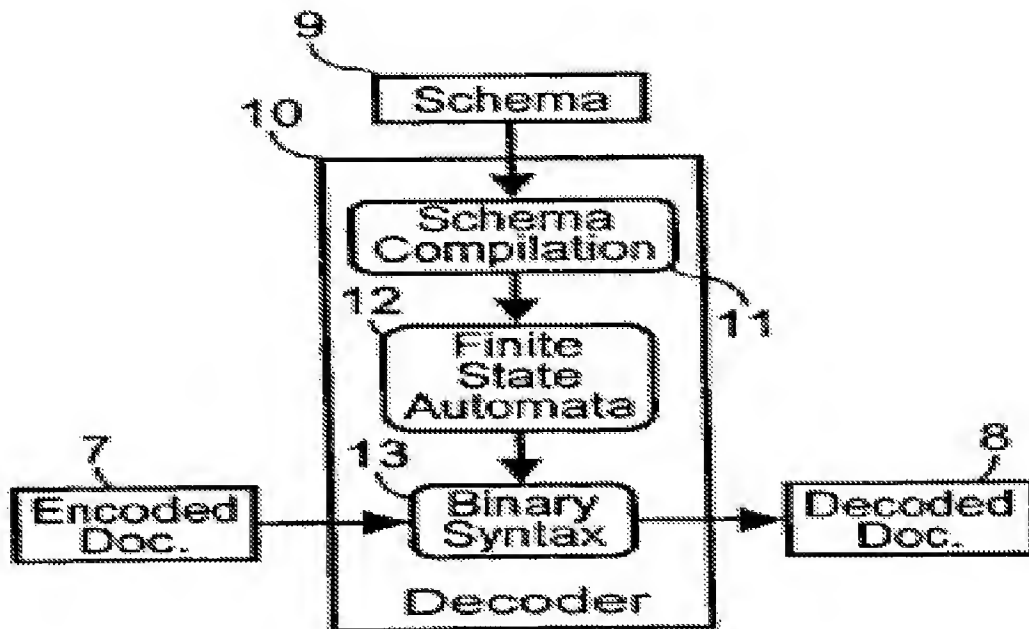


Fig. 2

and allocating the plurality of codes for types defined by ; carried out, for each namespace, an assignment to further namespace such that at least one assignment information is generated such that at least one inheritance relationship is described between inheriting namespace and bequeathing name spaces,

(See Fig. 2-2a and Page 4 Paragraph 90→ Page 5 Paragraph 93, Seyrat discloses the XML binary syntax code is allocated based upon the inheritance relationship between inheriting schema and the schema realization of flattening the type inheritances and in solving the Namespace supported. Also Seyrat further disclose encoding the document using said first and second schemas into a binary stream comprising for each elements



of the document a binary sequence encoding the element, and inserting in the binary sequence encoding the derived element a reference designating the first schema in which the structure of the derived element is defined, said reference designating the first schema being defined in a schema reference list containing references to all schemas used for encoding the document, the schema reference list being made accessible to the decoder. This generally is disclosed at the [Abstract of Seyrat].

In addition, Seyrat does not expressly teach, but Mory teaches:

**generating a plurality of codes using at least one namespace**

(See Page 3 Paragraph 55 → Page 5 Paragraph 85, Mory illustrates in Example 3 [i.e., plurality of codes] the coding of XML schema being generated based upon the Element Declaration of Table 1-->Table 3 that allows stating the unique and unambiguous numbering of all possible instances of the xml schema [0053], also Mory illustrates in ARRAY 1 [0085] an example of an instance of the schema which described in Example 3 [0060], which is one of the plurality of instances of schema as shown in Example 3 Paragraph [0060].)

This allows binary format for MPEG-7 instances [the Title]. This interpretation is supported by the applicant's specification and drawing, which is stated, "*XML schema definition are known.... schema A is defined in the upper part, as shown by a curly bracket, and on the other hand a schema X is defined in the lower part, similarly shown by a curly bracket. The schema X in turn uses data types, which have been imported from the schema A*" see disclosure at [Fig. 2a and Fig. 2b and Paragraph [0042] Pages

Art Unit: 2176

12-13]. Therefore, the artisan would have well appreciated that Mory's method of binary format for MPEG-7 instances based upon XML schema being generated based upon the Element Declaration which is stated the unique and unambiguous numbering of all possible instances of the schema is equivalent to generating a plurality of codes using at least one namespace as cited in independent claim 1.

Accordingly, It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Seyrat's method for encoding the XNL document such as MPEG-7 instances based upon XML schema, to includes a means of generating a plurality of codes using at least one namespace as taught by Mory, because Seyrat and Mory are both form the analogous art of encoding and decoding of XML documents such as MPEG-7 instances based upon XML schema; to produce predictable result of said more efficient to be processed and less costly to be transmitted utilizing ISO/IEC 15938-1 and more particularly MPEG-7 (Moving Picture Expert Group) particularly designed to deal with highly structured data, such as multimedia data [see Seyrat at Page 1 Paragraph [0008]].

***Claim 2,***

Seyrat and Mory teach the method of claim 1 and further comprise:

**the basis of an inheritance relationship between the name spaces and the inheritance relationships in a name space of the**

**basic type and the inheritance relationships in the name space of the subset.**

(See Fig. 2-2a and Page 4 Paragraph 90→ Page 5 Paragraph 93, Seyrat discloses the XML binary syntax code is allocated based upon the inheritance relationship between inheriting schema and the schema realization of flattening the type inheritances and in solving the Namespace supported. Also Seyrat further disclose encoding the document using said first and second schemas [i.e., subset schema/namespace] into a binary stream comprising for each elements of the document a binary sequence encoding the element, and inserting in the binary sequence encoding the derived element a reference designating the first schema in which the structure of the derived element is defined, said reference designating the first schema being defined in a schema reference list containing references to all schemas used for encoding the document, the schema reference list being made accessible to the decoder. This generally is disclosed at the [Abstract of Seyrat].)

***Claim 3,***

Seyrat and Mory teach the method of claim 2 and further comprise:

**wherein the addressable subset is determined based on an initial basic type by establishing the basic types of the bequeathing name space.**

(See the Abstract→Seyrat discloses a schema reference list containing references to all schemas used for encoding the document, the schema reference list being made

Art Unit: 2176

accessible to the decoder a schema reference list containing references to all schemas used for encoding the document, the schema reference list being made accessible to the decoder. Also Seyrat further disclose encoding the document using said first and second schemas [i.e., subset schema/namespace] into a binary stream comprising for each elements of the document a binary sequence encoding the element [see the Abstract].

See also Fig. 2-2a and Page 4 Paragraph 90→ Page 5 Paragraph 93, Seyrat discloses the XML binary syntax code is allocated based upon the inheritance relationship between inheriting schema and the schema realization of flattening the type inheritances and in solving the Namespace supported.)

***Claim 4,***

Seyrat and Mory teach the method of claim 3 and further comprise:

**wherein, based on the initial basic type for determining the subset, header types are determined in the inheriting name space, for which basic types are identified from the bequeathing name space by use of the assignment information, the initial basic type being a basic type of the basic types of the bequeathing name space.**

(See Fig. 2-2a and Page 4 Paragraph 90→ Page 5 Paragraph 93, Seyrat discloses the XML binary syntax code is allocated based upon the inheritance relationship between inheriting schema and the schema realization of flattening the type inheritances and in solving the Namespace supported. Also Seyrat further disclose encoding the document

Art Unit: 2176

using said first and second schemas [i.e., subset schema/namespace] into a binary stream comprising for each element. This generally is disclosed at the [Abstract of Seyrat].

Also see Paragraph 33-34→ Seyrat discloses the schema reference list comprising references to all schemas used for encoding the structured document is inserted in a header associated to the binary stream encoding the structured document, wherein basic types are identified from the committed name space by use of the assignment information.)

***Claim 5,***

Seyrat and Mory teach the method of claim 1 and further comprise:

**wherein the assignment information assigned to the inheriting name spaces is stored together with the respective name space in a first device carrying out at least one of the coding and decoding.**

(See Paragraph 33-34→ Seyrat discloses the schema reference list comprising references to all schemas used for encoding the structured document is inserted in a header associated to the binary stream encoding the structured document, wherein basic types are identified from the committed name space by use of the assignment information. Also Seyrat further discloses MPEG-7 (item 10 of Fig. 2) comprises a schema compiler (item 11 of Fig. 2) designed to receive and process schemas (item 9 of Fig. 2) such as XML schemas [i.e., namespace- see the applicant 's disclosure at Page 2 Paragraph [0007]], in order to obtain a binary syntax code (item 13) [i.e., coding]

Art Unit: 2176

that is executed to decode encoded documents 7 [i.e., coding a structure] that are applied in input of the decoder 10, the latter providing in output decoded documents 8 in format XML for example.[ Fig. 2 and Page 4 Paragraph 90→ Page 5 Paragraph 85].)

***Claim 6,***

Seyrat and Mory teach the method of claim 5 and further comprise:

**wherein the assignment information assigned to the inheriting name spaces is generated in a second device and transmitted together with the respective name space, in a first device carrying out at least one of the coding and decoding.**

(See Paragraph 33-34→ Seyrat discloses the schema reference list comprising references to all schemas used for encoding the structured document is inserted in a header associated to the binary stream encoding the structured document, wherein basic types are identified from the committed name space by use of the assignment information. Also Seyrat further discloses MPEG-7 (item 10 of Fig. 2) comprises a schema compiler (item 11 of Fig. 2) designed to receive and process schemas (item 9 of Fig. 2) such as XML schemas [i.e., namespace- see the applicant 's disclosure at Page 2 Paragraph [0007]], in order to obtain a binary syntax code (item 13) [i.e., coding] that is executed to decode encoded documents 7 [i.e., coding a structure] that are applied in input of the decoder 10, the latter providing in output decoded documents 8 in format XML for example.[ Fig. 2 and Page 4 Paragraph 90→ Page 5 Paragraph 85].

This allows computer networks, which is the main media for communications.

Art Unit: 2176

Computers can now be plugged to a shared network, operating systems allow applications to easily exchange messages, Internet infrastructure allows computers to find their interlocutor, applications use complex algorithms to synchronize themselves [i.e., device to device]. This is generally described at [0004].)

***Claim 7,***

Seyrat and Mory teach the method of claim 1 and further comprise:

**wherein respectively separate codes, which are independent of at least one of other schemas and name spaces, for the elements at least one of defined and declared in at least one of the schemas and name spaces in the groups of at least one of schemas and name spaces, are allocated for at least one of a schema a name space for a group of at least one of schemas and name spaces.**

(See Fig. 2-2a and Page 4 Paragraph 90→ Page 5 Paragraph 93, Seyrat discloses the XML binary syntax code is allocated based upon the inheritance relationship between inheriting schema and the schema realization of flattening the type inheritances and in solving the Namespace supported. Also Seyrat further disclose encoding the document using said first and second schemas into a binary stream comprising for each elements of the document a binary sequence encoding the element, and inserting in the binary sequence encoding the derived element a reference designating the first schema in which the structure of the derived element is defined, said reference designating the first schema being defined in a schema reference list containing references to all schemas

Art Unit: 2176

used for encoding the document, the schema reference list being made accessible to the decoder. This generally is disclosed at the [Abstract of Seyrat].

***Claim 8,***

Seyrat and Mory teach the method of claim 7 and further comprise:

**wherein, to identify the at least one of schema name space and the group of at least one of schemas and name spaces, the separate codes are sub-divided into corresponding address areas.**

(See Fig. 2-2a and Page 4 Paragraph 90→ Page 5 Paragraph 93, Seyrat discloses the XML binary syntax code is allocated based upon the inheritance relationship between inheriting schema and the schema realization of flattening the type inheritances and in solving the Namespace supported. Also Seyrat further disclose encoding the document using said first and second schemas into a binary stream comprising for each elements of the document a binary sequence encoding the element, and inserting in the binary sequence encoding the derived element a reference designating the first schema in which the structure of the derived element is defined, said reference designating the first schema being defined in a schema reference list containing references to all schemas used for encoding the document, the schema reference list being made accessible to the decoder. This generally is disclosed at the [Abstract of Seyrat].



Art Unit: 2176

**Claim 9,**

Seyrat and Mory teach the method of claim 7 and further comprise:

**wherein the separate codes respectively comprise a local code at least one of relating to at least one of the schema and the name space and relating to at least one of the group of schemas and name spaces and an identification code to identify at least one of the schema, and name space and the group of at least one of schemas and name spaces.**

(See Fig. 2-2a and Page 4 Paragraph 90→ Page 5 Paragraph 93, Seyrat discloses the XML binary syntax code is allocated based upon the inheritance relationship between inheriting schema and the schema realization of flattening the type inheritances and in solving the Namespace supported. Also Seyrat further disclose encoding the document using said first and second schemas into a binary stream comprising for each elements of the document a binary sequence encoding the element, and inserting in the binary sequence encoding the derived element a reference designating the first schema in which the structure of the derived element is defined, said reference designating the first schema being defined in a schema reference list containing references to all schemas used for encoding the document, the schema reference list being made accessible to the decoder. This generally is disclosed at the [Abstract of Seyrat].

**Claim 10,**

Seyrat and Mory teach the method of claim 7 and further comprise:

**wherein the separate codes are generated for at least one of  
global elements, substitution groups and data types.**

(See Page 3 Paragraph 55 → Page 5 Paragraph 85, Mory illustrates in Example 3 [i.e., plurality of codes] the coding of XML schema being generated based upon the Element Declaration of Table 1-->Table 3 that allows stating the unique and unambiguous numbering of all possible instances of the xml schema [0053] (i.e., global elements), also Mory illustrates in ARRAY 1 [0085] an example of an instance of the schema which described in Example 3 [0060], which is one of the plurality of instances of schema as shown in Example 3 Paragraph [0060]. Also see [Paragraph 166] Mori discloses certain primitive data types can imply a large amount of bytes (e.g. free text annotation or movie scripts), that is propose to code the data size using a variable number of bytes.)

Accordingly, It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Seyrat's method for encoding the XNL document such as MPEG-7 instances based upon XML schema, to includes a means of generating a plurality of codes using at least one of global elements, substitution groups and data types as taught by Mory, because Seyrat and Mory are both form the analogous art of encoding and decoding of XML documents such as MPEG-7 instances based upon XML schema; to produce predictable result of said more efficient to be processed and less costly to be transmitted utilizing ISO/IEC 15938-1 and more particularly MPEG-7

Art Unit: 2176

(Moving Picture Expert Group) particularly designed to deal with highly structured data, such as multimedia data [see Seyrat at Page 1 Paragraph [0008]].

***Claim 11,***

Seyrat and Mory teach the method of claim 10 and further comprise:

**wherein separate codes are generated for data types type codes such that within the inheritance tree of a name space the data type adjacent to a first data type in the same name space is at a code interval in respect of the first data type, said code interval corresponding to the number of data types derived from the first data type in this name space.**

(See Page 3 Paragraph 55 → Page 5 Paragraph 85, Mory illustrates in Example 3 [i.e., plurality of codes] the coding of XML schema being generated based upon the Element Declaration of Table 1-->Table 3 that allows stating the unique and unambiguous numbering of all possible instances of the xml schema [0053], also Mory illustrates in ARRAY 1 [0085] an example of an instance of the schema which described in Example 3 [0060], which is one of the plurality of instances of schema as shown in Example 3 Paragraph [0060]. Also see [Paragraph 166] Mori discloses certain primitive data types can imply a large amount of bytes (e.g. free text annotation or movie scripts), that is propose to code the data size using a variable number of bytes.)

Accordingly, It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Seyrat's method for encoding the XNL document such as MPEG-7 instances based upon XML schema, to includes a means of generating separate codes for data types type codes such that within the inheritance tree of a name space the data type adjacent to a first data type in the same name space is at a code interval in respect of the first data type, said code interval corresponding to the number of data types derived from the first data type in this name space as taught by Mory, because Seyrat and Mory are both form the analogous art of encoding and decoding of XML documents such as MPEG-7 instances based upon XML schema; to produce predictable result of said more efficient to be processed and less costly to be transmitted utilizing ISO/IEC 15938-1 and more particularly MPEG-7 (Moving Picture Expert Group) particularly designed to deal with highly structured data, such as multimedia data [see Seyrat at Page 1 Paragraph [0008]].

***Claim 12,***

Seyrat and Mory teach the method of claim 7 and further comprise:

**wherein the separate codes within a given name space are  
allocated according to a method comprising,**

(At Fig. 2 and Page 4 Paragraph 90→ Seyrat discloses this limitation that is a MPEG-7 (item 10) comprises a schema compiler (item 11) designed to receive and process schemas (item 9) such as XML schemas [i.e., namespace- see the applicant 's disclosure at Page 2 Paragraph [0007]].)

**sorting all data types of a name space, which were bequeathed  
from data types of other name spaces,**

(Seyrat discloses the XML binary syntax code is allocated based upon the inheritance relationship between inheriting schema (i.e., bequeathed) and the schema realization of flattening the type inheritances and in solving the Namespace supported [See Fig. 2-2a and Page 4 Paragraph 90→ Page 5 Paragraph 93].)

**in a list in the sequence of global type codes of the respective  
basic data types as defined in the MPEG-7 standard, the basic data  
types being the data types in other name spaces, from which the  
sorted data types were bequeathed; sorting data types of a name  
space, which were bequeathed from a specific basic data type of a  
specific other name space, are lexicographically in each instance;  
sorting all the data types of a name space, which were not  
bequeathed from a data type of another name space, according to  
the sequence defined in the MPEG-7 standard into the existing list of  
data types; and allocating the separate codes in list sequence to the  
data types of the name spaces.**

(At Fig. 2 and Page 4 Paragraph 90→ Seyrat discloses this limitation that is a MPEG-7 (item 10) comprises a schema compiler (item 11) designed to receive and process schemas (item 9) such as XML schemas [i.e., namespace- see the applicant 's

Art Unit: 2176

disclosure at Page 2 Paragraph [0007]], in order to obtain a binary syntax code (item 13) [i.e., coding] that is executed to decode encoded documents 7 [i.e., coding a structure] that are applied in input of the decoder 10, the latter providing in output decoded documents 8 in format XML for example. Also Seyrat further discloses encoding the document using said first and second schemas into a binary stream comprising for each elements of the document a binary sequence encoding the element, and inserting in the binary sequence encoding the derived element a reference designating the first schema in which the structure of the derived element is defined, said reference designating the first schema being defined in a schema reference list containing references to all schemas used for encoding the document, the schema reference list being made accessible to the decoder. This generally is disclosed at the [Abstract of Seyrat].

***Claim 13,***

Claim 13 is fully incorporated similar subject of claim 1 cited above, and are similarly rejected along the same rationale. Thus, Seyrat and Mory disclose every limitation of Claim 13 and provide proper reasons to combine, as indicated in the above rejections for Claim 1.

In addition Seyrat teaches:

Seyrat and Mory teach the method of claim 1 and further comprise:

**decoding a document previously coded according to a method  
as claimed in claim 1,**

Art Unit: 2176

(At the Abstract→ Seyrat discloses an encoding method for enabling a decoder to decode a structured document having a structure defined in a first schema not accessible to the decoder and resulting from a change of a second schema accessible to the decoder.)

***Claim 14,***

Seyrat and Mory teach the method of claim 11 and further comprise:

**wherein, to decode a binary type code, the code length of the separate codes of the binary type codes is determined from the number of derived data types.**

(At the Abstract→ Seyrat discloses an encoding method for enabling a decoder to decode a structured document having a structure defined in a first schema not accessible to the decoder and resulting from a change of a second schema accessible to the decoder.

See also Seyrat at Paragraph 17-18, discloses the binary sequence encoding each element of the document comprises a content field containing an encoded value of the element and a length field placed before the content field and containing an encoded value of a length of the content field, wherein the derived information element is associated in the first schema to a structure type which is restricted with respect to the structure type of the corresponding information element in the second schema, the binary sequence encoding the derived element comprising a content field and

Art Unit: 2176

appended to the content field, a reference to the first schema and a reference to the structure type of the derived element, defined in the second schema.)

***Claim 15,***

Seyrat and Mory teach the method of claim 4 and further comprise:

**wherein, to decode a specific type code, the sub-tree of the inheritance tree of the name space, in which the specific type code is located, is determined from the code intervals between adjacent data types.,**

(At Paragraph 17-18→ Seyrat discloses the binary sequence encoding each element of the document comprises a content field containing an encoded value of the element and a length field placed before the content field and containing an encoded value of a length of the content field, wherein the derived information element is associated in the first schema to a structure type which is restricted with respect to the structure type of the corresponding information element in the second schema, the binary sequence encoding the derived element comprising a content field and appended to the content field, a reference to the first schema and a reference to the structure type of the derived element, defined in the second schema. Also Seyrat further discloses at fig. 1 and fig. 2 the binary format of a tree structure of a structured document according to MPEG-7 standard and a MPEG-7 decoder.)



Art Unit: 2176

***Claim 16,***

Claim 16 is fully incorporated similar subject of claim 1 cited above, and are similarly rejected along the same rationale. Thus, Seyrat and Mory disclose every limitation of Claim 16 and provide proper reasons to combine, as indicated in the above rejections for Claim 1.

In addition Seyrat teaches:

**Decoding an XML-based document,**

(At Paragraph [0002]→ Seyrat described a method for encode and decode relates in general to the field of computer systems, and more particularly to a method and system for the compression of structured documents using document descriptions that conforms to a generalized markup language, such as SGML (Standard Generalized Markup Language) and XML (Extensible Markup Language).)

***Claim 17,***

Claim 17 is fully incorporated similar subject of claim 11 cited above, and are similarly rejected along the same rationale. Thus, Seyrat and Mory disclose every limitation of Claim 17 and provide proper reasons to combine, as indicated in the above rejections for Claim 113.

In addition Seyrat teaches:

**a method for decoding an XML-based document comprising:**

(At Paragraph [0002]→ Seyrat described a method for encode and decode relates in general to the field of computer systems, and more particularly to a method and system

Art Unit: 2176

for the compression of structured documents using document descriptions that conforms to a generalized markup language, such as SGML (Standard Generalized Markup Language) and XML (Extensible Markup Language).

**wherein, to decode a binary type code, the code length of the separate codes of the binary type codes is determined from the number of derived data types,**

(At Paragraph 17-18, discloses the binary sequence encoding each element of the document comprises a content field containing an encoded value of the element and a length field placed before the content field and containing an encoded value of a length of the content field, wherein the derived information element is associated in the first schema to a structure type which is restricted with respect to the structure type of the corresponding information element in the second schema, the binary sequence encoding the derived element comprising a content field and appended to the content field, a reference to the first schema and a reference to the structure type of the derived element, defined in the second schema.)

***Claim 18,***

Claim 18 is fully incorporated similar subject of claim 11 cited above, and are similarly rejected along the same rationale. Thus, Seyrat and Mory disclose every limitation of Claim 17 and provide proper reasons to combine, as indicated in the above rejections for Claim 11.

In addition Seyrat teaches:

**a method for decoding an XML-based document comprising:**

(At Paragraph [0002]→ Seyrat described a method for encode and decode relates in general to the field of computer systems, and more particularly to a method and system for the compression of structured documents using document descriptions that conforms to a generalized markup language, such as SGML (Standard Generalized Markup Language) and XML (Extensible Markup Language).

**wherein, to decode a specific type code, the sub-tree of the inheritance tree of the name space, in which the specific type code is located, code length is determined from the code intervals between adjacent data types.,**

(At Paragraph 17-18, discloses the binary sequence encoding each element of the document comprises a content field containing an encoded value of the element and a length field placed before the content field and containing an encoded value of a length of the content field, wherein the derived information element is associated in the first schema to a structure type which is restricted with respect to the structure type of the corresponding information element in the second schema, the binary sequence encoding the derived element comprising a content field and appended to the content field, a reference to the first schema and a reference to the structure type of the derived element, defined in the second schema.

Also Seyrat further discloses at fig. 1 and fig. 2 the binary format of a tree structure of a structured document according to MPEG-7 standard and a MPEG-7 decoder.)

***Claim 19,***

Claim 19 is fully incorporated similar subject of claim 11 cited above, and are similarly rejected along the same rationale. Thus, Seyrat and Mory disclose every limitation of Claim 17 and provide proper reasons to combine, as indicated in the above rejections for Claim 11.

In addition Seyrat teaches:

**a method for decoding an XML-based document comprising:**

(At Paragraph [0002]→ Seyrat described a method for encode and decode relates in general to the field of computer systems, and more particularly to a method and system for the compression of structured documents using document descriptions that conforms to a generalized markup language, such as SGML (Standard Generalized Markup Language) and XML (Extensible Markup Language).

**wherein, to determine the basic types, which originate from an initial basic type, code length is determined from the code intervals between adjacent data types.**

(At Paragraph 17-18, discloses the binary sequence encoding each element of the document comprises a content field containing an encoded value of the element and a

Art Unit: 2176

length field placed before the content field and containing an encoded value of a length of the content field, wherein the derived information element is associated in the first schema to a structure type which is restricted with respect to the structure type of the corresponding information element in the second schema, the binary sequence encoding the derived element comprising a content field and appended to the content field, a reference to the first schema and a reference to the structure type of the derived element, defined in the second schema.)

***Claim 20,***

Claim 19 is fully incorporated similar subject of claim 11 cited above, and are similarly rejected along the same rationale. Thus, Seyrat and Mory disclose every limitation of Claim 17 and provide proper reasons to combine, as indicated in the above rejections for Claim 11.

In addition Seyrat teaches:

**a method for decoding an XML-based document comprising:**

(At Paragraph [0002]→ Seyrat described a method for encode and decode relates in general to the field of computer systems, and more particularly to a method and system for the compression of structured documents using document descriptions that conforms to a generalized markup language, such as SGML (Standard Generalized Markup Language) and XML (Extensible Markup Language).

**wherein, to determine the number of types in the subset, code length is determined based on the header types from the code intervals between adjacent header types.**

(at Paragraph [0033]→ Seyrat discloses the schema reference list comprising references to all schemas used for encoding the structured document is inserted in a header associated to the binary stream encoding the structured document.

Also at Paragraph 17-18, discloses the binary sequence encoding each element of the document comprises a content field containing an encoded value of the element and a length field placed before the content field and containing an encoded value of a length of the content field, wherein the derived information element is associated in the first schema to a structure type which is restricted with respect to the structure type of the corresponding information element in the second schema, the binary sequence encoding the derived element comprising a content field and appended to the content field, a reference to the first schema and a reference to the structure type of the derived element, defined in the second schema. )

***Claim 21,***

Claim 21 recites a coding device configured to perform the method of claim 1. Thus, Seyrat and Mori disclose every limitation of Claim 21 and provide proper reasons to combine, as indicated in the above rejections for Claim 1-Also see Seyrat at [0002], discloses a computer systems, and more particularly to a method and system for the compression of structured documents using

Art Unit: 2176

document descriptions that conforms to a generalized markup language, such as SGML (Standard Generalized Markup Language) and XML (Extensible Markup Language). Such documents may contain multimedia information. Also Seyrat further discloses at fig. 1 and fig. 2 the binary format of a tree structure of a structured document according to MPEG-7 standard and a MPEG-7 decoder and encoder.)

***Claim 22,***

Claim 22 recites a coding device configured to perform the method of claim 13. Thus, Seyrat and Mori disclose every limitation of Claim 22 and provide proper reasons to combine, as indicated in the above rejections for Claim 13-Also see Seyrat at [0002], discloses a computer systems, and more particularly to a method and system for the compression of structured documents using document descriptions that conforms to a generalized markup language, such as SGML (Standard Generalized Markup Language) and XML (Extensible Markup Language). Such documents may contain multimedia information. Also Seyrat further discloses at fig. 1 and fig. 2 the binary format of a tree structure of a structured document according to MPEG-7 standard and a MPEG-7 decoder and encoder.)

Art Unit: 2176

**Claim 23,**

Claim 23 recites a coding and decoding device configured to perform the method of claim 21. Thus, Seyrat and Mori disclose every limitation of Claim 23 and provide proper reasons to combine, as indicated in the above rejections for Claim 21-Also see Seyrat at [0002], discloses a computer systems, and more particularly to a method and system for the compression of structured documents using document descriptions that conforms to a generalized markup language, such as SGML (Standard Generalized Markup Language) and XML (Extensible Markup Language). Such documents may contain multimedia information. Also Seyrat further discloses at fig. 1 and fig. 2 the binary format of a tree structure of a structured document according to MPEG-7 standard and a MPEG-7 decoder and encoder.)

**Claims 25-26,** Seyrat teaches:

**a method for coding and decoding an XML-based document**

**comprising:**

(At Paragraph [0002]→ Seyrat described a method for encode and decode relates in general to the field of computer systems, and more particularly to a method and system for the compression of structured documents using document descriptions that conforms to a generalized markup language, such as SGML (Standard Generalized Markup Language) and XML (Extensible Markup Language).



Art Unit: 2176

**Claim 27,**

Claim 27 recites a coding and decoding device configured to perform the method of claim 22. Thus, Seyrat and Mori disclose every limitation of Claim 27 and provide proper reasons to combine, as indicated in the above rejections for Claim 22-Also see Seyrat at [0002], discloses a computer systems, and more particularly to a method and system for the compression of structured documents using document descriptions that conforms to a generalized markup language, such as SGML (Standard Generalized Markup Language) and XML (Extensible Markup Language). Such documents may contain multimedia information. Also Seyrat further discloses at fig. 1 and fig. 2 the binary format of a tree structure of a structured document according to MPEG-7 standard and a MPEG-7 decoder and encoder.)

It is noted that any citations to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art.

See, MPEP 2123.

### ***Response to Arguments***

#### ***Brief description of cited prior art:***

**Seyrat** discloses a ***MPEG-7 decoder*** 10 comprises a schema compiler 11 designed to receive and process schemas 9 such as XML schemas, in order to obtain a binary syntax code 13 that is executed to ***decode/encoded xml documents*** 7. Each complex type defined in the processed schema is transformed into a finite state automaton expressing the complex type coding rules. The input encoded document 7 is applied to the decoder in the form of a binary stream on which the binary syntax code is executed using ***type inheritances*** and in solving the ***Namespace support***. This phase generates a realized schema 15. The second phase consists in ***generating a syntax tree*** from each complex type. This is generally disclosed at [Para 0090 through 0092 and Figure 2 and 2a of Seyrat].

**Mory** discloses a method for ***encoding/decoding*** XML like document which is an instance of XML-like schema using table derived from said schema, said table containing identification information for solely identifying each description element in a hierarchical level, and structural information for retrieving any child description element from its parent description element, and scanning a hierarchical memory representation of the instance from parent description elements to child description elements until reaching the description element to be encoded, and retrieving the identification information of each scanned description element, encoding said description element to be encoded as a fragment comprising said content and a sequence of the retrieved

Art Unit: 2176

identification information [e.g., allocating the codes types utilized XML-like schema ].

Applications: XML; XML-schema; MPEG-7 [e.g., generating a plurality of codes using at least one namespace]. See Mory at the Abstract and at page 3 paragraph 55 through page 5 paragraph 85 also at table 1→table 3.

In addition, the Examiner noted the Specification expressly states, "**The term 'name space' is hereafter used as a synonym for the term 'schema'**" (see Page 2, Paragraph 0007, third sentence).

Response to Remarks:

Beginning on page 8/11 of the Remarks (hereinafter the remarks), Applicant argues the following issues, which are accordingly addressed below.

Regarding claims Double Patent Rejection:

As stated in the remarks at page 8, the "Double Patent Rejection", "*Applicants acknowledge this provisional rejection, and will take the appropriate steps to address this rejection once the claims in this application and the claims in pending Application 10/564,601 are indicated as including allowable subject matter since this provisional rejection is based on claims that may change.*" Thus the Examiner respectfully maintains the Double Paten Rejection at least at this time [see above rejection for details].

Regarding 101 rejections of claims 21-23 and 25-27:

Applicants asserts that *"the method of coding and decoding structured documents as recited in the claims may arguably be performed by computer software; the Examiner will readily appreciate that such computer software may not be executed without the necessary hardware. Accordingly, even though the specification does not explicitly disclose a hardware device to implement the methods of coding and/or decoding structured documents as recited in, for example, claims 1, 13, 21 and 22, one of ordinary skill in the art will readily understand that to execute such computer software would require the necessary hardware device and it is this hardware device to which claims 21-23 and 27 are directed."* See the remarks at page 8 the "Rejection under 35 U.S.C. § 101".

The Examiner disagrees.

As discuss above and in previously presented Office Action mailed 09/04/2008. As recognized by the Examiner, claims 21-23 and 27 recite a *"method"* comprising a *"coding and decoding device"*. The recited *"coding device"* and *"decoding device"* for coding and decoding XML-based document such MPEG-7 utilizing instances of schemas/namespaces are illustrated at Figure 1, and the Specification expressly states, *"a coding device and a decoding device to implement the inventive coding and/or decoding method. An example embodiment of the invention also includes a coding and decoding device, with which an embodiment of the inventive coding method and an embodiment of the inventive decoding method can be implemented"* see Specification

Art Unit: 2176

→ Page 11, Paragraph [0039]. The Examiner interprets **coding device** and **decoding device** described herein **may be performed in** either **hardware** or **software**, since it is not clearly define the separation of either hardware or software. Thus, for purposes of examination, the examiner interprets the recited "*coding device*" and "*decoding device*" for coding and decoding XML-based document such MPEG-7 utilizing instances of schemas/namespaces to comprise only computer software. Accordingly, the "*coding device*" and "*decoding device*" recited in Claim(s) 21-23 and 27 is **software per se**.

Computer software is not a process, a machine, a manufacture or a composition of matter, as set forth in 35 U.S.C. 101. Accordingly, the claims do not recite statutory subject matter.

Applicant may obviate the rejection by cancelling the claims.

Regarding rejections under 35 U.S.C. § 103:

**First**, applicant asserts that the proposed combination [of Seyrat, and Mory] when considered as a whole does not teach or suggest the claimed feature that, "at least one inheritance relationship is described between an inheriting name space and bequeathing name spaces," as recites in claim 1- (the remarks Page 10, second paragraph, second sentence), because Seyrat is directed solely to encoding method for enabling a decoder to decode a structured document and teaches suing identifiers of a used schema for coding a particular element data type (the remarks Page 10, second paragraph, first sentence).

For purposes of responding to Appellant's argument, the examiner will assume that the Appellant is arguing for the patentability of Claim 1.

The Examiner disagrees.

As discuss above and in previously presented Office Action mailed 09/04/2008. As recognized by the Examiner, Seyrat discloses a **MPEG-7 decoder** 10 comprises a schema compiler 11 designed to receive and process schemas 9 such as XML schemas, in order to obtain a binary syntax code 13 that is executed to **decode/encoded xml documents** 7. Each complex type defined in the processed schema is transformed into a finite state automaton expressing the complex type coding rules. The input encoded document 7 is applied to the decoder in the form of a binary stream on which the binary syntax code is executed using **type inheritances** and in solving the **Namespace support**. This phase generates a realized schema 15. The second phase consists in **generating a syntax tree** from each complex type. This is generally disclosed at [Para 0090 through 0092 and Figure 2 and 2a of Seyrat]. In addition, the Examiner noted the Specification expressly states, "**The term 'name space' is hereafter used as a synonym for the term 'schema'**" (see Page 2, Paragraph 0007, third sentence).

Thus, Seyrat clearly disclosed the inheritance relationship is described between an inheriting name space and bequeathing name spaces, as recited in claim 1.

**Second**, applicant asserts that the proposed combination [of Seyrat, and Mory] when considered as a whole does not teach or suggest the claimed feature that "allocating the plurality of codes for types defined by name spaces," as recites in claim 1- (the remarks Page 10, third paragraph, third sentence), because Seyrat's MPEG-7 decoder 10 obtains binary syntax code 13 that is executed to decode encoded documents (the remarks Page 10, third paragraph, first sentence).

For purposes of responding to Appellant's argument, the examiner will assume that the Appellant is arguing for the patentability of Claim 1.

The Examiner disagrees.

As discuss above and in previously presented Office Action mailed 09/04/2008. As recognized by the Examiner, Seyrat discloses the input encoded document 7 is applied to the decoder in the form of **a binary stream** on which the binary syntax code is executed using **type inheritances** and in solving the **Namespace support**. This phase generates a realized schema 15. The second phase consists in **generating a syntax tree** from each complex type [*type inheritances*]. This is generally disclosed at [Para 0090 through 0092 and Figure 2 and 2a of Seyrat]. Also Seyrat further disclosed schema identifiers are defined by a schema identifier dictionary which is known from the decoder, for example inserted in the header 2 of the encoded document or inserted in a decoder initialization and configuration file used by the decoder. This **schema identifier dictionary** contains **all possible schema identifiers** [e.g., allocating the appropriate

Art Unit: 2176

schema for decoding and encoding] that are to be used by the decoder to decode the encoded documents received. This dictionary can be read by the decoder using the following binary syntax [see Seyrat at Para 105-107]. In addition, the Examiner noted the Specification expressly states, "**The term 'name space' is hereafter used as a synonym for the term 'schema'**" (see Page 2, Paragraph 0007, third sentence).

Thus, Seyrat clearly disclosed allocating the plurality of codes for types defined by name spaces, as recited in claim 1.

In addition, for further clarification the Examiner would like to point out that **Mory** also disclosed a method for **encoding/decoding** XML like document which is an instance of ***XML-like schema using table derived from said schema, said table containing identification information for solely identifying each description element*** in a hierarchical level, and structural information for retrieving any child description element from its parent description element, and scanning a hierarchical memory representation of the instance from parent description elements to child description elements until reaching the description element to be encoded, and retrieving the identification information of each scanned description element, encoding said description element to be encoded as a fragment comprising said content and a sequence of the retrieved identification information [e.g., ***allocating the codes types utilized XML-like schema*** ]. Applications: XML; XML-schema; MPEG-7 [e.g.,



Art Unit: 2176

generating a plurality of codes using at least one namespace]. See Mory at the Abstract and at page 3 paragraph 55 through page 5 paragraph 85 also at table 1→table 3.

Accordingly, based upon all the above evidence, thus Seyrat and Mory clearly disclose all the limitation of claims 1-23 and 25-27 and provided proper reasons to combine. Thus claims 1-23 and 25-27 remain rejected at least at this time.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quoc A. Tran whose telephone number is 571-272-8664. The examiner can normally be reached on Monday through Friday from 9 AM to 5 PM EST.

Art Unit: 2176

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on 571-272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Quoc A. Tran  
Patent Examiner

/DOUG HUTTON/  
Supervisory Patent Examiner, Art Unit 2176